VDH VIRGINIA DEPARTMENT OF HEALTH
Protecting You and Your Environment

Information for Healthcare Providers – Sept. 30, 2005: Potential Tularemia Exposure

Notice to Clinicians:

The Virginia Department of Health (VDH) has become aware that from Saturday, September 24th through Sunday, September 25th environmental air monitors in SW Washington DC, more specifically the Capitol Mall area, signaled the low level presence of *F. tularensis*, the bacterium that causes tularemia. Environmental air samples collected from northern Virginia during this time period have all been negative. At this time, public health agencies have no reports of any related human or animal illnesses.

VDH is providing this announcement as a precautionary measure to ensure that clinicians are aware of the situation and are able to recognize, test, and report any suspected cases of tularemia to the appropriate public health authorities.

CDC is also distributing a national alert because the Capitol Mall area is a highly-trafficked tourist destination, and on Saturday, September 24th, was the site of several very well attended outdoor events.

Clinical Presentations

Tularemia can manifest a variety of symptoms depending on the site of infection. These include skin ulcers, swollen and painful lymph nodes, conjunctivitis, pharyngitis, oral ulcers or pneumonia-like illness. Early symptoms almost always include the abrupt onset of fever, chills, headache, muscle aches, joint pain, dry cough and progressive weakness. The clinical presentations most likely to occur after an aerosol exposure to *F. tularensis* are pneumonic, oculoglandular and oropharyngeal.

The usual incubation period for tularemia is 3-5 days, but in rare instances can be as long as 14 days. Illness is not communicable from person to person and can be effectively treated with readily available antimicrobials.

Preliminary Case Definition

Onset from Monday September 26 through October 5 of an acute febrile illness associated with at least one of the following:

- conjunctivitis with preauricular lymphadenopathy (oculoglandular)
- stomatitis or pharygitis or tonsillitis and cervical lymphadenopathy (oropharyngeal)
- cough, shortness of breath, pleuritic chest pain (pneumonic)

which is not otherwise explained in a resident or visitor to the National Capitol Region on Saturday or Sunday, September 24-25.

Immediately notify your local health department of all potential cases of tularemia. You may also use the Provider Emergency Toll-Free number at 866-531-3068 to reach your local health department.

Human Diagnostic Specimens

Clinical specimens may include:

- Bronchial/tracheal washes or aspirates, sputum, trans-thoracic lung aspirates, or pleural fluid collection
- Swabs of visible lesions or affected areas (e.g., conjunctiva or pharynx)
- Aspirates from lymph nodes
- Whole blood or blood cultures are acceptable specimens, but are generally positive in cases of severe illness only

Laboratory Testing (Culture)

Microbiology laboratory personnel should be alerted when *F. tularensis* is clinically suspected, so that appropriate laboratory precautions can be taken.

F. tularensis is a fastidious, slow-growing organism that requires cysteine for growth.

F. tularensis may be cultured on the following:

- cysteine supplemented agar including chocolate agar (CA)
- cysteine heart agar with 9% chocolatized blood (CHAB)
- buffered charcoal yeast extract (BYCE)
- Thayer-Martin agar

Culture plates should be held for 5-7 days at 35-37^{0}C ($C0_2$ is acceptable) and checked for growth daily.

F. tularensis can be isolated from nutrient enriched specimens (tissues) on sheep blood agar (SBA), but the organism will usually fail to thrive with passage on SBA. Growth on CHAB provides for presumptive identification of *F. tularensis* as the organism shows characteristic growth on this media (green, opalescent, raised, shiny colonies at 24-48 hours).

Note: Specimens for recovery of live bacteria should be collected before antibiotics are administered.

Prophylaxis

CDC does not recommend mass or targeted prophylaxis at this time because:

- the usual incubation period has passed without an increase in suspicious illnesses in the area, and air sampling since September 25th has been negative
- infection is readily treatable and generally has a low mortality rate with medical care
- infection cannot be transmitted to others

Treatment

Adults

Preferred choices:
Streptomycin, 1g IM twice daily **OR**
Gentamicin, 5 mg/kg IM or IV once daily†

Alternative choices:
Doxycycline, 100 mg IV twice daily **OR**
Ciprofloxacin, 400 mg IV twice daily†

Children

Preferred choices:
Streptomycin, 15 mg/kg IM twice daily (should not exceed 2 g/day) **OR**
Gentamicin, 2.5 mg/kg IM or IV 3 times daily†

Alternative choices:
Doxycycline,
If weight >= 45 kg, 100 mg IV
If weight < 45 kg, give 2.2 mg/kg IV twice daily **OR**
Ciprofloxacin, 15 mg/kg IV twice daily (should not exceed 1 g/day)

Pregnant Women

Preferred choices:
Gentamicin, 5 mg/kg IM or IV once daily† **OR**
Streptomycin, 1 g IM twice daily

Alternative choices:
Doxycycline, 100 mg IV twice daily **OR**
Ciprofloxacin, 400 mg IV twice daily†

One antibiotic, appropriate for treatment for patient age, should be chosen from among the alternatives. Treatment with streptomycin, gentamicin, or ciprofloxacin should be continued for 10 days; treatment with doxycycline should be continued for 14-21 days. Persons beginning treatment with intramuscular (IM) or intravenous (IV) doxycycline, ciprofloxacin can switch to oral antibiotic administration when clinically indicated.

†Not a U.S. Food and Drug Administration-approved use.

Additional Information

Information for healthcare providers, including treatment options for tularemia, is available on the VDH website at www.vdh.virginia.gov/EPR/Agents_Biological_Tularemia.asp as well as from the Centers for Disease Control Prevention at www.bt.cdc.gov/agent/tularemia/